

REMARKS

The applicants have amended the claims in accordance with the Examiner's comments in order to overcome the objections and rejections cited in the Office Action of December 8, 1998.

SPECIFICATION

1. Applicants are submitting herewith an Abstract as required by 37 CFR 1.72(b).

CLAIM OBJECTIONS

2. Applicants have amended the claims so that claim 4 is now in the proper multiple dependent claim form.

CLAIM REJECTIONS - 35 USC § 112

3. Applicants have amended claims 2-3 and 5-10 so as to particularly point out and distinctly claim the subject matter which applicants regard as the invention.
4. Applicants have amended claims 2 and 3 to clarify that starch and protein are components of flour.
5. Applicants have amended claim 5 to specifically describe the treatment that is performed on the flour.

6. Applicants have amended claim 8 to clarify the method that they are claiming as their invention and have removed the language that the Examiner found to be indefinite.

7- 8. Applicants have amended claims 9 and 10 so that they are no longer indefinite and are in proper form.

CLAIM REJECTIONS - 35 USC § 102

9-15. The claims have been rejected as anticipated on U.S. Pat. No. 3,859,108 to Ware et al., which claims a flour size wherein the protein is present in substantially non-degraded form (col. 3, line 67-col. 2, line 1). In contrast, the amended claims of the present invention require the degradation of the starch and protein components of the flour by treatment with ammonium persulfate, amylase, an acid, protease or a combination thereof.

At col. 5, lines 1-4, Ware et al. disclose that their invention is based on the use of non-degraded proteins:

The **presence of the protein fraction in the flour in non-degraded form** as a stable co-solution with the starch fraction is a **novel and characterizing feature** of the sizes of this invention.
(emphasis added)

Ware et al. teach that their sizes are improved due to the non-degraded protein portion of the flour, and state at col. 4, lines 49-57 that:

All [the sizes] are characterized by the **protein fraction** of the flour being in stable co-solution, **in substantially non-degraded form**, with a molecular weight reduced modification of the starch fraction of the flour. This marriage of the protein and starch fraction of the flour is **unique and is responsible for the improved properties of the paste and sizes** of this invention produced therefrom.
(emphasis added)

Ware et al. disclose sizes that are formed by methods that result in a stable co-solution of the starch and protein fractions of the flour without substantial degradation of the protein (col. 5, lines 25-28). Ware et al. teach methods for preparing sizes that are specifically intended to avoid the degradation of the protein fractions of the flour. Thus, Ware et al. teach away from the degraded proteins that are used in the paper and cardboard of the present invention.

Furthermore, Ware et al. neither teach nor suggest that flour with a degraded protein fraction can be successfully used in a paper or cardboard. On the contrary, Ware et al. teach that flour-based sizes in the prior art were economically precluded from use (col. 4, lines 13-18).

CLAIM REJECTIONS - 35 USC § 103

16-18. Claims 3 and 8 have been rejected as obvious based on Ware et al. and Ware et al. in view of European Application No. 0,554,659 to Schober, respectively. Applicants submit that, as set forth above, the amendments to the claims make the present invention distinguishable from Ware et al. since the present invention covers flour having degraded protein fractions that are neither taught, nor suggested, by Ware et al. The teachings of Schober alone would not make the present invention obvious to one skilled in the art. Moreover, one skilled in the art would be discouraged by the teachings of Ware et al. from using degraded proteins and, therefore would not find the present invention obvious in view of the teachings of Ware et al. alone or in combination with Schober.

CONCLUSION

As a result of the amendments to the claims, Applicants submit that the claims are now in proper form and distinguishable from the prior art. Therefore, Applicants respectfully request early allowance of the claims.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Kevin E. McDermott", written over a horizontal line.

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